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International Studies Show Mixed Results Among U.S. Students

The latest results of two major international studies present a mixed picture of the academic abilities of American students.

In the 2003 Trends in International Mathematics and Science Study (TIMSS), American fourth- and eighth-graders significantly outperformed many of their international peers. While eighth-graders—including boys, girls and minority students—improved their scores compared to past TIMSS studies (1995 and 1999), scores for fourth-graders remained static in both subject areas.

In the 2003 Program for International Student Assessment (PISA), U.S. ninth- and tenth-graders (15-year-olds) performed below the international average in math literacy and problem-solving. This lag among high school students, says President Bush and U.S. Secretary of Education Margaret Spellings, underscores the need for annual learning assessments for all

students in grades 9-11. Under the *No Child Left Behind Act*, such assessments currently apply only to students in grades 3-8. (For both studies' findings, see page 3.)

The PISA results were released in December 2004 by the Paris-based Organization for Economic Cooperation and Development. A report on America's PISA results, published by the U.S. Department of Education's National Center for Education Statistics (NCES), is available at <http://nces.ed.gov/surveys/pisa>, or by calling 1-877-4ED-PUBS with identification number ERN3787P, while supplies last.

The 2003 TIMSS results is the third release since 1995 from the Amsterdam-based International Association for the Evaluation of Educational Achievement. For NCES' report on the U.S. TIMSS results, visit <http://nces.ed.gov/timss>, or call

1-877-4ED-PUBS with identification number ERN3791P, while supplies last.

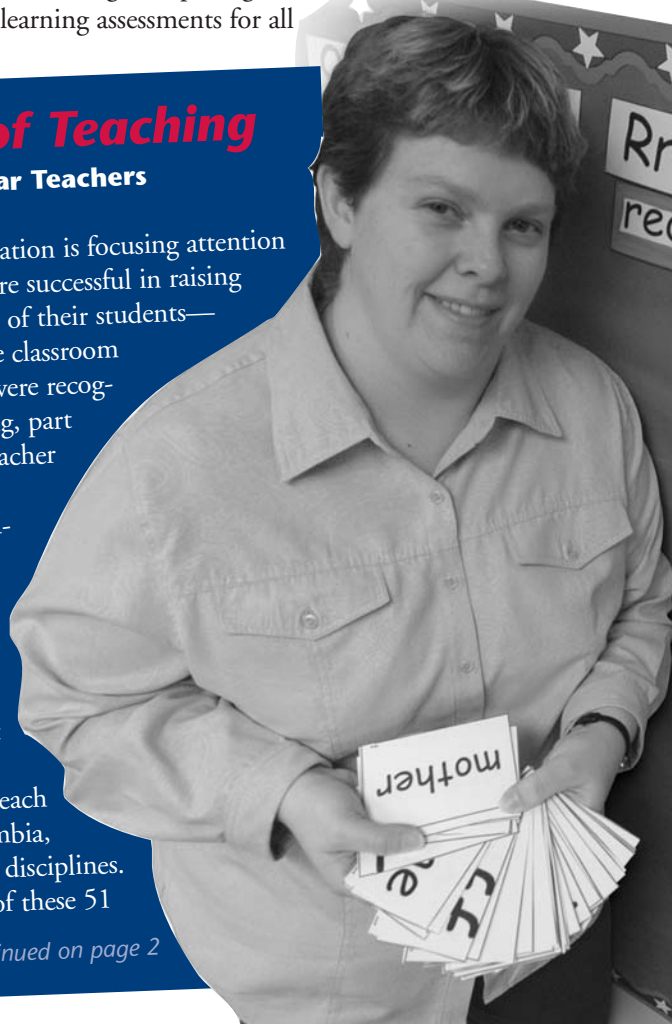
American Stars of Teaching

ED Program Recognizes Stellar Teachers

The U.S. Department of Education is focusing attention on exemplary teachers who are successful in raising academic achievement for all of their students—often through the use of innovative classroom strategies. Last fall, these teachers were recognized as American Stars of Teaching, part of the Department's Teacher-to-Teacher Initiative honoring educators who have made a difference in their students' lives.

Nominated by their peers, honorees were selected by a committee of former teachers at the Department of Education based on their success in raising student achievement. American Stars of Teaching have been identified in each state and in the District of Columbia, and represent all grade levels and disciplines. The following is a small sample of these 51 American Stars.

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"The neatest thing about teaching first grade," says Patty Berkley, "is convincing the kids that they can read." Berkley is the only teacher in the state of Oklahoma to be recognized as an American Star of Teaching.

Photo by Glen Ellman



of Education (ED). Margaret Spellings, Secretary.

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**Patti Berkley,
Oologah Lower
Elementary School, Oologah, Okla.**

Teaching to the level of each student in her class, Patti Berkley (photographed below) uses academic and learning-style assessments to understand each child's strong points. "I teach each child through his or her strengths," she explained.

Berkley noted that the assessment results generally fall into three main groups, which allows her to organize students into small groups to ensure that each student masters the required skills.

As a first-grade teacher, Berkley weaves various strategies throughout the reading curriculum as well as the school-wide social studies- or science-based thematic units that integrate the arts. This comprehensive approach to learning was adopted by the Oklahoma A+ Schools network, of which the Oologah Lower Elementary School is one of 19 participants.

"The neatest thing about teaching first grade is convincing the kids

that they can read," she said. "Every year there's that moment when you put the first sentence on the board and their eyes light up. You can see the spark when they know they've read their first sentence."



**Donna Sollars,
Tiffin Elementary
School, Chillicothe,
Ohio**

With the challenge of teaching math, social studies, science and health to fourth-graders, Donna Sollars summarizes her teaching strategy. "I have an interest in each child," she said, explaining that she does whatever it takes to help her students learn, including providing extra help beyond the school day.

The strategy is working. Tiffin Elementary, where Sollars has taught for 13 years, has been recognized as an Ohio School of Promise for three years, with more than 80 percent of its students passing required reading and math achievement tests.

"Each day is different," said Sollars. "Seeing students achieve makes every day rewarding."

**Sharon Turner, George Elementary
School, Jackson, Miss.**

Students in Sharon Turner's fifth-grade class have busy hands. Using hands-on learning techniques, she develops lessons that involve students in making, seeing or doing things while learning math and science.

"Paperwork was boring when I was in school," she notes, "so I try to use manipulatives—dominoes, cards, dice—instead of worksheets."

She also encourages students to use the chalk-



board to work out problems.

Turner uses student achievement information and progress monitoring to plan her lessons for both large- and small-

group work. She considers herself part of a team of teachers who have worked together to make George Elementary School one of three Jackson city schools ranked Level 5 (superior-performing) on the state's accountability system, up from Level 1 (low-performing) in 2001.

Describing her role in preparing students for life, she said, "It's wonderful to make a difference in their lives."



**Meghan Little,
KIPP DC: KEY
Academy,
Washington, D.C.**

Spirals dominate Meghan Little's fifth-grade math program—not physical spirals, but curriculum spirals that keep math concepts coming back at more complex levels throughout the academic year. "The spiral curriculum shows students the interrelatedness of concepts," she explained. "They get a chance to review these concepts throughout the year."

Working from a yearlong plan, Little uses six-week assessments to check student knowledge. In small groups, she works with individual students to help them master specific skills. Her school, KIPP DC: KEY Academy, a charter school in the District of Columbia, has recorded the highest math scores in the city.

Little says she looks for a change in students' attitudes about math as a measurement of success. "When I can see in kids' faces the point at which they go from being confused to saying, 'I'm going to attack this; I can do this,'" she said, "that's the most special moment for me."

American Stars of Teaching is part of the Teacher-to-Teacher Initiative, which includes regional workshops, a teacher toolkit and regular e-mail updates. For a complete listing of the 2004 honorees, visit www.ed.gov/teachers/how/tools/initiative/american-stars.html.

Photo by Glen Ellman



"America enjoys many, many good schools and great teachers who share our passion and commitment to excellence. As someone who has worked for school boards, a state legislature and a Texas governor, I know that many solutions can be found outside of

Washington, D.C. We will find and share them as we continue to build bridges to educators, public officials and parents."

U.S. Secretary of Education Margaret Spellings, in her swearing-in ceremony, Jan. 31, 2005, at the U.S. Department of Education in Washington, D.C.



**February 15
8:00-9:00 p.m. ET**

Education News Parents Can Use monthly broadcast will focus on preventing drug and alcohol use among students. Visit www.ed.gov/news/av/video/edtv or call 1-800-USA-LEARN for details.

Close-Up:



No Child Left Behind

Improving Student Achievement Through Technology

The technology that has so dramatically changed the world outside the classroom is now changing the environment within it. According to a new report from the U.S. Department of Education, at least 15 states provide some form of virtual schooling to supplement regular classes or to provide for special needs students, and about 25 percent of all public schools now offer some type of e-learning or online instruction.

Toward a Golden Age in American Education: How the Internet, the Law and Today's Students Are Revolutionizing Expectations examines the state of educational technology and offers recommendations for maximizing its contribution to improving education. It also focuses on the role of the *No Child Left Behind Act* in bridging the "digital disconnect" between Internet-savvy students and their schools in order to align technology with improved learning.

The 68-page report, which serves as the Department's National Education Technology Plan, details seven major steps, which address: leadership; funding; teacher training; the development of e-learning and virtual schools; greater access to broadband communications; the transition from print to digital media; and the integration of data systems, such as technology-based assessments of student performance.

In addition, the report also profiles a sample of pioneering schools and school districts across the country—in Alaska, California, Florida, Missouri and Virginia—along with state initiatives—in Arkansas, Idaho, Louisiana, New Mexico, Pennsylvania, Virginia and West Virginia—that have successfully enriched students' learning experiences through multimedia, simulations and interactive software.

For a copy of *Toward a Golden Age in American Education*, visit www.ed.gov/about/offices/list/os/technology/plan/2004/plan.html or call 1-877-4ED-PUBS, while supplies last.

Please Note

On Jan. 20, 2005, the U.S. Senate confirmed Margaret Spellings as the eighth secretary of education. Look for more coverage on her in our next issue.

—Of the 39 industrial nations participating in the study, the United States was outperformed by 26 in math literacy and 28 in problem-solving.

—American white students performed above the PISA average (literacy: 500; problem-solving: 500) in both topics, but black and Hispanic students performed below the average.

—Males outperformed females in mathematics literacy in the United States and in two-thirds of participating countries. However, there was no difference in performance between males and females in problem-solving.

Tests' Key Findings

The 2003 *Trends in International Mathematics and Science Study (TIMSS)* revealed:

—In fourth-grade math, the United States ranked 12th out of 25 nations participating in that portion of the study. In eighth-grade math, the United States ranked 15th out of 45 nations.

—In science, U.S. fourth-graders ranked 6th, and eighth-graders, 9th.

—The performance of American fourth-graders in both areas was lower

in 2003 than in 1995 relative to the 14 nations that participated in the studies, while the performance of American eighth-graders in both areas was higher in 2003 than in 1995 relative to 21 nations.

Key findings from the 2003 Program for International Student Assessment (PISA) included:



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**PRESORTED
FIRST CLASS**



**"When it comes to
the education of our
children ... failure is
not an option."**

PRESIDENT GEORGE W. BUSH

NEW RESOURCES! **Celebrating Black History Month, Presidents Day**



February ushers in a month of celebrating American history. In observance of Black History Month and Presidents Day (Feb. 21), the federally supported Web site for hundreds of learning resources—www.ed.gov/free—will feature historical collections contributed by various federal agencies, including the National Archives, the National Park Service, the National Endowment for the Humanities and the Library of Congress.

Starting the first of this month, and each day thereafter, the Federal Resources for Educational Excellence (FREE) Web site's home page will feature a new teaching resource specifically about black history. These resources draw from a wealth of materials that explore the heritage of African Americans, including *The African-American Mosaic*, a guide that covers topics such as colonization and Liberia, abolitionists and slavery, and western migration and homesteading. Also highlighted on the site are prominent individuals such as United Nations diplomat Ralph Bunche, who became the first person of color in the world to receive the Nobel Prize for Peace, and Jackie Robinson, the first African-American to officially play on a Major League Baseball team.

Midway through the month (Feb. 16-22), in honor of Presidents Day, the FREE Web site will focus on the American presidency through the speeches, diaries and other manuscripts of former U.S. presidents. The "Thomas Jefferson Papers," for instance, is the largest collection of documents belonging to the third president, with 20,000 digitized images of various correspondence, manuscripts, commonplace books and financial account books. For a more comprehensive view of the American presidency, the "Presidents of the United States" collection offers a biography and photo of each leader.